Work Order August-19-13 9:1		5776		*105	5776*			· ,			Page 1
Revision ID:	D2249-041 Fitting Assemb	oly	 -	Accept	*N900	<u>0</u> 40	100)* s	etup Start Stop	ıv.	S1* S2*
Start Date: 8 Required Date: 9 Reference:	3/19/13 9/02/13	Start Qty: 2.00 Req'd Qty: 2.00	*2* *2*		Cust Item I Customer:						
	Process Pla	n: <u>ис</u> 5	Date: 13-08-15			ate:		R	tun Start Stop		R1* R2*
Sequence ID/ Work Center ID		Operation Description	· di	Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject . Number	
Draw Nbr		sion Nbr	•		•	, . e					
D2249 i00 *100* Large Fab Large Fab	Rev AV EE OVE	Large Fah Memo	r Dwg D2249 and QSI 004	0.90				2	E	13-1	8-20
*110 *110* QC Quality Control		QC9- Inspect visual per Memo	QSI004- Fusion Welds	0.00)_13-0	8- <u>2</u> 0	0AS 0.09
120 *120*		QC5-Inspect part comp	oleteness to step on W/O	0.00				(<u>13-0</u>	DB- <u>23</u>	(0A)
QC		Memo		0.00					_		1

Quality Control

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DOA Date 18/22

Work Order:	105	3774	p		DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
	pri				Rework Scrap			Skid-tube Nachining	Crosstube Small Fab	Dro.	Water Jet d. Eng. Coor.	Engineering X Quality
Part NO.	<u> </u>	<u>, (</u>	· V1					~ 		4	· ·	· '
NCD No	13	<u> </u>	771		Use-as-is			noforming	Finishing	Kec/\$tol	re/Packaging	Other
INCR INO.		<u>L</u>	1 1		Work Order Update			Large Fab	Composite]	Supplier	J LJ
	<u> </u>	r		D	ONE TIME ONLY	_	and a			C: 0	· · · · · · · · · · · · · · · · · · ·	[
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Cause	Date	Step	Qty		or Non-conformance	Chi	ef Eng	Descri	iption	Date	Verification	QC Inspector
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Equip/Tooling	13/8/19	ا ال		र सम	Total Man	(4	Diug non	ninche)	a	QAS Q	GAS.
Operator	ļ ' ·			() ()	OVERSIZED PER	1		Acceptable D.S. email	UP.	12 11 00	09	16
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Setup	ļ			LUGS	SHOULD BE CENTERED			Acceptable	_ per		15.00	13/04/20
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Process	00			יע אט	2249-3 AS MARKED UP				•			
Supplier					HERT 1 OF ATTACHED		1					
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	Bending				Bend		Grain			Ovalized		Pressure/Forced
. 🗆	Centre No	t Concer	ntric to C	o/s	BOM/Route	Πı	Hardwa	re		Over/Under	tolerance	Temperature/Cure
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-	Heat Treat			-	Countersink	H۱	Mislabe	led		Positioned V	Vrong	
	Inspection Strip in Tube				Cut Too Short	├ ──┤	Misread			Power Loss/		Other
	Ripples in Bend			Drill Holes	Offset							
Torque Waves in Extrusion				Drawing	Out of Calibration							
 				Finish	Out of Sequence							
	→ Wave/Twist in Tube				Folio	\vdash		Dimensions		-	<u> </u>	

Work Ord		05776		*105	776*				Page 2
Item ID: Revision ID: Item Name:	D2249-041 Fitting Asse			Accept	*N9000	140100)* Setuj	Start Stop	*NS1* *NS2*
Start Date: Required Date: Reference:	8/19/13	Start Qty: 2.00 Req'd Qty: 2.00	*2* *2*		Cust Item ID Customer:	12			IVIA
Approvals:		Plan:			Dat		Run	Start Stop	*NR1* *NR2*
Sequence ID/ Work Center I 130 *130* Powdercoat Powder Coating		Operation Description White Gloss(Ref.4.3.5.2 Memo START TIM	Jo *	Set Up/ Run Hours 0.00 0.00 OVEN TEMPERATURE:	Tool ID	Tool # Plan Code			Reject Insp. Number Stamp
NIALIA *140* QC Quality Control	Č	QC3- Inspect Part Finish Memo	ı	0.00			2*	<u>_</u> £	<u> 13108/20</u>
150 *150* Packaging	·	Identify as per dwg & St	ock Location:	0.00			2x_	_4.	D. 13-08-20

Packaging

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											QA Closed:	Date:		
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Part I	Nο.					Scrap	1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality	
						Use-as-is	1		noforming	Finishing	┥	re/Packaging	Other	
NCR	No.					Work Order Update	1		~⊢—	Composite	1	Supplier		
	•						•							
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Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descrip	otion	Date	Verification	QC Inspector	
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	Centre Not Concentric to O/S					BOM/Route	\perp	Hardwa		<u> </u>	Over/Under		Temperature/Cure	
Ì	Cracks					Broken/Damaged		1 '	on Incomplete	į.	Part Incorre		Weld	
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		Heat Tre	at			Countersink		Mislabe		$oldsymbol{oldsymbol{oldsymbol{oldsymbol{eta}}}$	Positioned V	_	7	
		Inspection Strip in Tube				Cut Too Short	1	Misread	l	1	Power Loss/Surge Other			

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Turning Sequence Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Ord		5776		*105	5776*							Page 3
Item ID: Revision ID: Item Name:	D2249-041 Fitting Assem	ıbly		Accept	*N900	040	100)*	Setup	Start Stop		S1* S2*
Start Date: Required Date Reference:	8/19/13 : 9/02/13	Start Qty: 2.00 Req'd Qty: 2.00	*2* *2*		Cust Item I Customer:	D:						
Approvals:	Process Pla	an:	Date:	Tooling:	Da	nte:	_		Run	Start	*N	R1*
••	QC:		Date:	SPC (Y/N):	Da	ıte:				Stop	*N	R2*
Sequence ID/ Work Center I	D	Operation Description QC21- Final Inspection	- Work Order Release	Set Up/ Run Hours	Tool 1D	Tool #	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
160 QC Quality Control		Мето		0.00					1(5	13.	-08 ⁻ 7	e p

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Root					Descri	ption of work order update		nitial	Act	tion	Sign &					
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector			
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Landir	<u> </u>				_	General	_	l		_	7		7			
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	\vdash	Cracks			<u> </u>	Broken/Damaged	-	· ·	ion Incomplete	.	Part Incorred	-	Weld			
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	ıl	Wave/Tw	ıst ın Tub	oe .	1	Folio	Outside Dimensions									

August-19-13 9:15:56 AM

Work Order ID: 105776

105776

Parent Item: D2249-041

Parent Item Name: Fitting Assembly

D2249-041

Start Date: 8/19/13

Required Date: 9/02/13

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP: D 05.02.04Added Step 9KJ/RF
IPP Rev:E 08-07-28 chg qty of D2249-1 DD verified by:EC

Component Item ID/ Item ID/ Item ID Replacement Item ID Purch Item ID		 						- · ·			 .		
Location Loc Oty Loc Code									Qty per Kit				Status
Location Loc Oty Loc Code	D2249-1	 Manufactured	No			100	Each	12.0000	2	4			
WA002 12									**	E_	13-8-	<u>ں ر</u>	<u></u>
D2249-3 Manufactured No 100 Each 19 0000 1 2				Location		<u>Loc</u>	Qty	Loc Code					
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			. , Δx
ATE	DQA:	Date:	
	QA Closed:	Date:	
AGAINST DE	PARTMENT,	/PROCESS	
Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Quality Other
on otion	Sign & Date	Verification	QC Inspector

Unapproved **FAULT CATEGORY Landing Gear** General Pressure/Forced Bend Grain Ovalized Bending BOM/Route Over/Under tolerance Temperature/Cure Centre Not Concentric to O/S Hardware Broken/Damaged Weld Part incorrect Cracks Inspection Incomplete Wrong Stock Pulled Part Lost/Missing Crushed/Crimped Instructions Incomplete/Unclear Burrs Maintenance Part Moved Cuffs Contamination Positioned Wrong Mislabeled **Heat Treat** Countersink Other Misread Power Loss/Surge Inspection Strip in Tube Cut Too Short Ripples in Bend Drill Holes Offset Drawing Out of Calibration Torque Waves in Extrusion

Out of Sequence

Outside Dimensions

WORK ORDER NON-CONFORMANCE / UPDATE

Initial

Chief Eng

Skid-tube

Machining

Large Fab

Thermoforming

DISPOSITION

Work Order Update

Description of work order update

or Non-conformance

Finish

Folio

Rework

Use-as-is

Scrap

Action

Description

ž__

Turning Sequence

Wave/Twist in Tube

Yes / No

Work Order:

Date

NCR No.

Root

Cause

Doc/Data Equip/Tooling

Operator Material Setup Other Process Supplier Training

Part No.

Qty

Step

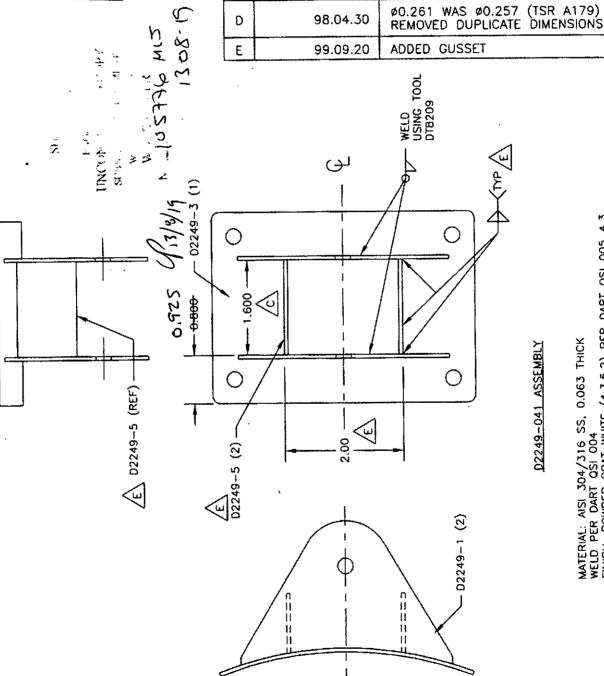
NCR:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G



DESIGN	DRAWN BY	DART AEROSPACE HAWKESBURY, ONTARIO, CAN	
CHECKED	APPROVED	DRAWING NO.	REV. E
KE	-9-	D2249	SHEET 1 OF 4
DATE		TITLE	SCALE
99.09.20		FITTING	NTS
Α	94.06.20	NEW ISSUE	
В	95.11.30	DIMENSION CHANGE	
С	95.12.14	DIMENSION CHANGE	

RELEASED 199.10.12 RED



MATERIAL: AISI 304/316 SS, 0.063 THICK
WELD PER DART QSI 004
FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
ALL DIMENSIONS ARE IN INCHES
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE SPECIFIED

											DQA:	Date	e:		
NCR: Ye	es ./ No				WORK ORDER NON-	COI	NFORM	MANCE / U	PDATE			_	_	-	
											QA Closed:	Date	e: _		
Work Orde					DISPOSITION				AGAINST	DE	PARTMENT,	/PROCESS			
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(3/0/14	·				Use-as-is	1		noforming	Finishing	—	-1	re/Packaging	┪	Other	
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<u> </u>	Cracks			<u> </u>	Broken/Damaged		-1	ion Incomplete		\vdash	Part Incorre	}			
		/Crimped			Burrs	_	-1	ions Incomplete	e/Unclear	L	-1	Part Lost/Missing Wrong Stock Pu			
1	Cuffs				Contamination		Mainte	enance		Part Moved					

Mislabeled

Out of Calibration

Out of Sequence

Outside Dimensions

Misread

Offset

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

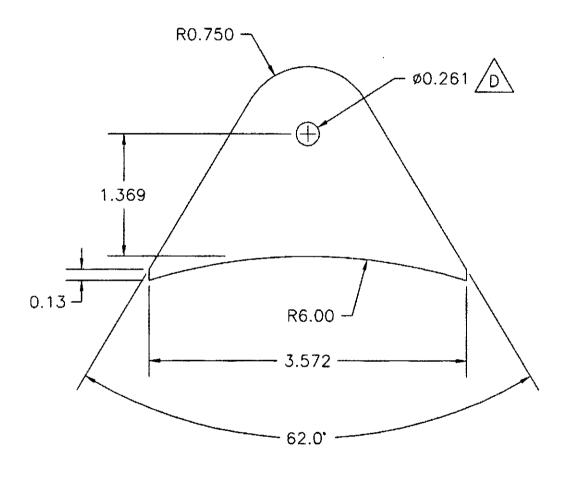






	DESIGN	DRAWN BY		OSPACE LTD.
	CHECKED	APPROYED	DRAWING NO. D2249	REV, E SHEET 2 OF 4
İ	DATE		TITLE	SCALE
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RELEASED TO KEE



D2249-1 LUG

MATERIAL: AISI 304/316 SS 0.063 THICK ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

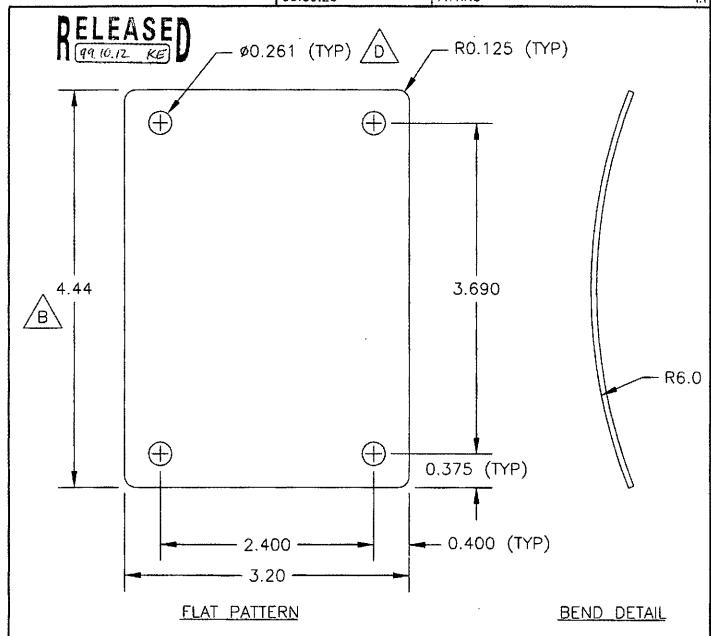
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Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Hardware Over/Under tolerance Temperature/Cure Cracks Broken/Damaged Inspection incomplete Part incorrect Weld Crushed/Crimped Burrs Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Cuffs Contamination Maintenance Part Moved Heat Treat Countersink Mislabeled Positioned Wrong Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Other Ripples in Bend Drill Holes Offset Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Finish Out of Sequence	<u></u>						AUL	T CATE	GORY				
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Heat Treat Countersink Mislabeled Positioned Wrong Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Other Ripples in Bend Drill Holes Offset Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Finish Out of Sequence		lacksquare	-		-	╡	-	1	*	Unclear	-	Issing	Twicoug Stock Pulled
Inspection Strip in Tube Cut Too Short Misread Offset Torque Waves in Extrusion Turning Sequence Cut Too Short Misread Offset Out of Calibration Out of Sequence Out of Sequence		⊢ ⊣			_	=	-	Į.		 	-	4/	
Ripples in Bend Drill Holes Offset Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Finish Out of Sequence		⊢–1		. T. d		╡	-	1		 - -	-∤	_	Other
Torque Waves in Extrusion Drawing Out of Calibration Turning Sequence Finish Out of Sequence		—		TTUDE	<u> </u>			•	J.	L	Trower ross/	ange	Tomer
Turning Sequence Finish Out of Sequence		⊢ ''					\vdash	1	Calibration		_		<u> </u>
							-						<u> </u>
		\vdash			\vdash	Folio		1	•				







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CHECKED	APPROYED	DRAWING NO.	REV. E
KE	#	D2249	SHEET 3 OF 4
DATE		THILE	SCALE
99.09.20		FITTING	1-1



D2249-3 BASE PLATE

MATERIAL: AISI 304/316 SS 0.063 THICK ALL DIMENSIONS ARE IN INCHES

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

											DQA:	Date	e: _	·
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPDA	TE	QA Closed:	— _ ——Date	- -	•
						DISPOSITION	_			AGAINST DE			-	
Work Ord	er:						_				•	,	_	—
						Rework			Skid-tube (Crosstube	Water Jet			Engineering
Part I	No.					Scrap			Machining :	Small Fab	Pro	d. Eng. Coor.	_	Quality
						Use-as-is]	Thern	noforming	Finishing	Rec/Store/Packaging		Ц	Other
NCR I	No.					Work Order Update]		Large Fab C	omposite		Supplier		
						<u> </u>							_	
Root			1		Descri	ption of work order update		Initial	Action		Sign &			
Cause		Date_	Step	Qty		or Non-conformance	Ct	ief Eng	Descripti	ion	Date	Verification	4	QC Inspector
Doc/Data			İ		ŀ		1							
Equip/Tooling	L_				<u> </u>						ļ			
Operator													Ì	
Material													ł	
Setup													- 1	
Other													-	
Process							ŀ							
Supplier														
Training]			i						-	
Unapproved					<u>.</u>					<u> </u>	<u> </u>		丄	
						F	AUI	T CATE	GORY					
Landi	ing (Gear				General		-			,	_	_	
Bending				Bend	Grain			Ovalized	Ļ	—	Pressure/Forced			
		Centre No	ot Conce	ntric to	o/s	BOM/Route	L	Hardwa	re		Over/Under tolerance		-	Temperature/Cure
		Cracks				Broken/Damaged		Inspect	on Incomplete	<u> </u>	Part Incorrect		1	Weld
1		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/Uncl	ear	Part Lost/Mi	ssing],	Wrong Stock Pulled

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Contamination Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Part Moved

Positioned Wrong

Power Loss/Surge

Other

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Cuffs

Heat Treat

Inspection Strip in Tube

Torque Waves in Extrusion

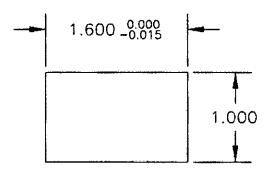






DESIGN	ORAWN BY		ROSPACE LTD y, ontario, canada
CHECKED	APPROVED	DRAWING NO.	REV. E
KE	1	D2249	SHEET 4 OF 4
DATE		TITLE	SCALE
99.09.20		FITTING	1:1





D2249-5 GUSSET

MATERIAL: AISI 304/316 SS 0.063 THICK ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

Date:

DQA:

NCR:	Yes	1	No
IVCN.	143	•	110

NCR: Y	es	/ No					WORK ORDER NON-C	Or	NFORM	MANCE / UP	DATE					•
													QA Closed:	Da	ite:	
Work Order:					DISPOSITION		AGAINST DEPARTMENT/PROCESS									
Part No.					Rework Scrap			Skid-tube Crosstube Machining Small Fab			Water Jet Prod. Eng. Coor.			Engineering Quality Other		
NCR No.				Use-as-is Work Order Update]	·		Finishing Composite	—			Other				
Root					Desc	rip	tion of work order update	Ī	nitial	Ac	tion		Sign &			
Cause		Date	Step	Qty		0	r Non-conformance	Ch	ief Eng	Desc	ription		Date	Verificatio	n	QC Inspector
loc/Data										i.						
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Landir	ng G	ear			_	_	General	_				_	1			1
		Bending			Ļ	_	Bend		Grain				Ovalized			Pressure/Forced
ļ		Centre No	ot Concer	ntric to (o/s	-	BOM/Route	Hard		Hardware		_	Over/Under tolerance		_	Temperature/Cure
Į	Cracks			Broken/Damaged	Inspect		Inspection Incomplete		匚	Part Incorrect			Weld			
		Crushed/0	Crimped		L		Burrs	Instruction		ions Incomplete/	Unclear	L	Part Lost/Missing			Wrong Stock Pulled
Į	Cuffs Contamination			Maintenance				Part Moved								
		Heat Trea	it				Countersink	Mis		led		L	Positioned Wrong			
		Inspection	n Strip in	Tube			Cut Too Short		Misread	1			Power Loss/	Surge		Other
		Ripples in	Bend				Drill Holes		Offset							
		Torque W	laves in E	xtrusior	າ [Drawing		Out of 0	Calibration						
		Turning S	equence				Finish		Out of S	Sequence				<u></u>		
Wave/Twist in Tube				Folio		Outside Dimensions										

Chris Provencal

From:

David Shepherd

Sent:

Saturday, August 17, 2013 6:58 PM

To:

Chris Provencal

Cc:

Mike Petsche

Subject:

RE: Deviation D2249-041

Yup ... I am OK with this. But I suggest we create a PAR to update the drawing to increase the size of the plate by 0.25" all around (with the holes drilled in the part).

Regards, David

From: Chris Provencal

Sent: August-15-13 2:57 PM

To: David Shepherd **Cc:** Mike Petsche

Subject: Deviation D2249-041

David,

A customer wants a D2249-041 Fitting (D206-540-011/-013 Basket) without attachment holes. What I am told is that he needs to shift the part somewhat to get it to align with holes in the a/c. Because the e/D for the holes is already near the minimum (1.5), we would have to enlarge the plate by 0.25". So the 4.44" x 3.20" flat dims would become 4.69" x 3.45".

We would like to create (2) custom parts with the aforementioned deviation. In the interest of minimizing paperwork, would you be OK with sending such a part to the customer without a DSI (for drill size and edge distance), and assume that he will follow standard practices for AN4 drill sizes and edge distance? We could this information in an email or letter.

Chris Provencal Mechanical Designer

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